

# DIGICROWN2

## Displacement Sensors



## Bore Gauges



## Forks and Ring Gauges



## Bench Gauges



## Indicators and Electronic Display Units



## Interface Boxes for Data Acquisition



## Software



**DIGICrown2**, digitized version, is the probe line that provides, combined with the DIGICrown network system following advantages:

- **ACCURACY.** High levels of measuring accuracy is guaranteed by the linearization data stored in the memory of the connector. The DIGICrown box is able to read the error map and perform an automatic compensation.
- **PLUG & GAUGE.** The memory in the connector allows any DIGICrown2 probe to be connected to the DIGICrown network system without requiring individual probe programming.
- **FLEXIBILITY.** The modularity of the system allows to create a network where the least possible number of 2-channel input interface boxes are used to meet the number of probes required by the application. In a comprehensive DIGICrown network the DIGICrown2 can be combined with any type of incremental sensor, with analogue output sensors, and various I/O interfaces to provide a complete machine integration.
- **VERSATILITY.** The application can be designed by selecting the most suitable probe for the measuring task (for any measuring range the models are available with spring or pneumatic push, with axial or radial cable output and with or without gasket), and connecting it to the interface box.
- **APPLICATIONS.** Both static and synchronized dynamic measurements can be performed (maximum sampling frequency 4,000 samples/sec).
- **CONNECTIVITY.** The DIGICrown2 probe is designed for the DIGICrown network and GAGEPod systems.

Mechanical specifications	±0,5 mm	±1 mm	±2 mm	±2 mm LongRange
Measuring range [mm]	1	2	2	4
Mechanical travel [mm]	1,5	3	6,6	11
Body Ø [mm]	8	8	8	8
Cable length [m]	2	2	2	2
Operating temperature [°C]	-10 to +65	-10 to +65	-10 to +65	-10 to +65
Storage temperature [°C]	-20 to +100	-20 to +100	-20 to +100	-20 to +100
Contact tread	M2,5	M2,5	M2,5	M2,5
Accuracy error [µm]	±(0,2+K*1)	±(0,2+K*1)	±(0,3+17*K1)	-
Repeatability (2.77 σ) [µm]	≤0,15	≤0,15	≤0,15	≤0,15
Zero thermal drift [µm/°C]	<0,25	<0,25	<0,25	<0,25

Standard (with gasket)	±0,5 mm		±1 mm				±2 mm				±2 mm LongRange				
Spring strength [N/mm]	0,17		0,14	0,04	0,023	0,023				0,023	0,03	0,02	0,023		
Measuring force [N±25%]	1,00		0,70	0,8 to 2,2	0,4	0,70				0,7 to 2	0,5	0,70			
Pneumatic Push pressure bar				0,5 to 1						0,5 to 1					
psi				7,5 to 14,5						7,5 to 14,5					
Vacuum retract pressure bar				-0,45 to -0,6						-0,45 to -0,6					
psi				-6,5 to -8,7						-6,5 to -8,7					
Gasket	Fluoroelast.		Fluoroelastometer				Fluoroelastometer				Fluoroelastometer				
Protection grade	IP65		IP65				IP65				IP65				
Contact type	carbide		carbide				carbide				carbide				

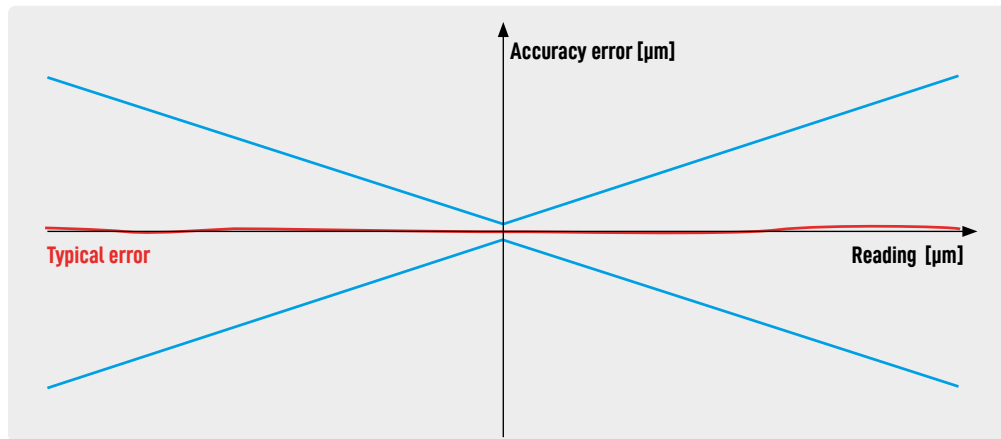
Cable (A=axial - R=radial)	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R
Actuation (*)	S		S		PP		V		PV		S		PP		V		PV	
Trade name	D01	R001	D02	R002	PA002	P002	VA002	VD02			D04	R004	PA004	P004	VA004	VD04		
Order code	B3P001N0000	B3P001R1200	B3P002N0000	B3P002R1200	B3P002N0400	B3P002N1600	B3P002N0560	B3P002N1760										

Soft touch (without gasket)	±0,5 mm		±1 mm				±2 mm				±2 mm LongRange				
Spring strength [N/mm]	0,070		0,06	0,045		0,016				0,016	0,010		0,016		
Total Measuring force [N±25%]	0,3		0,30	0,18 to 1,9		0,30				0,18 to 1,9		0,30			
Pneumatic Push pressure bar				0,5 to 2						0,5 to 2					
psi				7,3 to 29						7,3 to 29					
Vacuum retract pressure bar				-0,45 to -0,6						-0,45 to -0,6					
psi				-6,5 to -8,7						-6,5 to -8,7					
Protection grade	IP50		IP50(IP54 PP version)				IP50(IP54 PP version)				IP50 (IP54 PP version)				
Contact type	Nylon (PA66)		Nylon (PA66)				Nylon (PA66)				Nylon (PA66)				

Cable (A=axial - R=radial)	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R
Actuation (*)	S		S		PP		V		PV		S		PP		V		PV	
Trade name	D01L	R001L	D02L	R002L	PA002L	P002L			PV002L	PV002L	D04L	R004L	PA004L	P004L			PV004L	PV004L
Order code	B3P001N5000		B3P002N5000	B3P002N6200	B3P002N5400	B3P002N6600			B3P002N5800	B3P002N7000								

\* Movement S= spring - PP= pneumatic push - V= vacuum - PV= push/vacuum - \*\* Accuracy = +/-MAX(0,5+2\*K;7\*K) \*\*\* K= Reading (mm)

## ACCURACY ERROR



Mechanical specifications		±2,5 mm	±5 mm	±10 mm
Measuring range [mm]		5	10	20
Mechanical travel [mm]		6,6	11	21
Body Ø [mm]		8	8	8
Cable length [m]		2	2	2
Operating temperature [°C]		-10 to +65	-10 to +65	-10 to +65
Storage temperature [°C]		-20 to +100	-20 to +100	-20 to +100
Contact tread		M2,5	M2,5	M2,5
Accuracy error [µm]		±(0,6+K*2)	±(0,6+K*2)	±(1,2+K*2)
Repeatability (2.77 σ) [µm]		≤0,15	≤0,15	≤0,15
Zero thermal drift [µm/°C]		<0,25	<0,25	<0,25

Standard (with gasket)		±2,5 mm				±5 mm				±10 mm			
Spring strength [N/mm]		0,023	0,03	0,02		0,03	0,02	0,02		0,03	0,016	-	
Measuring force [N±25%]		0,70	0,7 to 2	0,5		0,70	0,8 to 2	0,4		0,1	0,7 to 2	-	
Pneumatic Push pressure	bar psi		0,5 to 1 7,5 to 14,5				0,5 to 1 7,5 to 14,5				0,5 to 1 7,5 to 14,5		
Vacuum retract pressure	bar psi			-0,45 to -0,6 -6,5 to -8,7				-0,45 to -0,6 -6,5 to -8,7				-	-
Gasket		Fluoroelastometer				Fluoroelastometer				Fluoroelastometer			
Protection grade		IP65				IP65				IP65			
Contact type		carbide				carbide				carbide			

Cable (A=axial - R=radial)	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R
Actuation (*)	S		PP		V		PV		S		PP		V		PV	
Trade name	D05		RD05		PAD05		PD05		VAD05		VD05					
Order code	B3PD05N0000		B3PD05N1200		B3PD05N0400		B3PD05N1600		B3PD05N0560		B3PD05N1760					

Soft touch (without gasket)		±2,5 mm				±5 mm				±10 mm			
Spring strength [N/mm]		0,016	0,01			0,02	0,07			0,030	0,010		
Total Measuring force [N±25%]		0,30	0,18 to 1,9		0,14 to 2,3	0,30	0,18 to 1,9		0,14 to 2,3	0,30	0,18 to 1,9		0,14 to 2,3
Pneumatic Push pressure	bar psi		0,5 to 2 7,3 to 29		0,125 to 2,9 1,825 to 29		0,5 to 2 7,3 to 29		0,125 to 2,9 1,825 to 29		0,5 to 2 7,3 to 29		0,125 to 2,9 1,825 to 29
Vacuum retract pressure	bar psi				-0,45 to -0,6 -6,5 to -8,7				-0,45 to -0,6 -6,5 to -8,7				-0,45 to -0,6 -6,5 to -8,7
Protection grade		IP50 (IP54 PP version)				IP50 (IP54 PP version)				IP50 (IP54 PP version)			
Contact type		Nylon (PA66)				Nylon (PA66)				Nylon (PA66)			

Cable (A=axial - R=radial)	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R
Actuation (*)	S		PP		V		PV		S		PP		V		PV	
Trade name	D05L		RD05L		PAD05L		PD05L		VAD05L		VD05L					
Order code	B3PD05N5000		B3PD05N6200		B3PD05N5400		B3PD05N6600		B3PD05N5800		B3PD05N7000					

## Displacement Sensors



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## Forks and Ring Gauges



## Bench Gauges



## Indicators and Electronic Display Units



## Interface Boxes for Data Acquisition



## Software

